****

**Africa RISING Supports Capacity in Biometrics and Data Management in West Africa**

The International Institute of Tropical Agriculture (IITA) led Africa RISING project in West Africa funded a short-course on ‘*Statistics and Statistical Computing Using SAS Software’* for early career scientists from Ghana and Mali. The course was run by Sam Ofodile and Sam Korie of the IITA Biometric Unit from 4-8 August, 2014 at the Little Acre Hotel, Aburi, Ghana. The course aims at enabling participant to: use SAS statistical software for data analysis, manage qualitative and quantitative data effectively, perform various statistics (e.g., data management, transformation, regression, ANOV, Multi-variate analysis, etc.), basic experimental designs and analysis, basic sampling designs and imputing survey data, interpret simple and complex data outputs, and present results in an accessible fashion (tables, graphic, etc.).

Seventeen scientists (8 female and 9 male) from 10 agencies in Ghana participated - Water Research Institutes, Soil Research Institute, Ministry of Food and Agriculture (MoFA), Savanna Agricultural Research Institute (SARI), Animal Research Institute (ARI), Kwame Nkrumah University of Science and Technology (KNUST), Valley View University (VVW), University for Education (UEW), Oil Palm Research Institute (OPRI) and Africa RISING research assistants. Two staff of the International Crops Research Institute for the Semi-arid Tropics (ICRISAT) in Mali attended.



*Photo: Participants and trainers at the Africa RISING Biometrics short-course*

Dr. Joel Sam, Director of the Institute for Scientific and Technical Information (INST) in his opening address informed the participants that data management and statistical analysis are important skills needed by researchers for good research and career development. He thanked the Africa RISING project for funding the course, and encouraged the young scientists to take the training seriously.

to acquire the necessary skills for data management and analysis.

Dr. Asamoah Larbi, the Chief Scientist of the Africa RISING project in West Africa and the Representative of IITA in Ghana, said building the capacity of National Agricultural Research and Extension Systems (NARES) in research-for-development on sustainable intensification of the smallholder mixed crop-livestock farming systems is a key component of the project. He stressed that the course will equip them with the necessary data management and statistical analysis skills for their research.

****

*List of Participants*

Africa RISING Ghana – Training Course in Biometrics and Data Management with SAS

4-8 August 2014, Little Acre Hotel, Aburi, Ghana

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S/N | Participants Name | Sex | Country | Institute Affiliation |
| 1 | Regina Banu | F | Ghana | Water Research Institute |
| 2 | Adelaide de-Souza | F | Ghana | Ministry of Health |
| 3 | Judith Frempong | F | Ghana | Soil Research Institute |
| 4 | Martha Egyiri | F | Ghana | Kwame Nkrumah Univ Science and Technology |
| 5 | Linda Arhin | F | Ghana | Oil Palm Research Institute |
| 6 | Lantana Munkaila | F | Ghana | Animal Research Institute |
| 7 | Comfort Yelepoie | F | Ghana | IITA-Africa RISING |
| 8 | Mary Otiwaa Osei | F | Ghana | Valley View University |
| 9 | Peter Asungare | M | Ghana | Savanna Agricultural Research Institute |
| 10 | Safo Kantanka | M | Ghana | Kwame Nkrumah Univ Science and Technology |
| 11 | Holy Kobla | M | Ghana | University of Education |
| 12 | Shaibu Mellon | M | Ghana | IITA-Africa RISING |
| 13 | Brain Akakpo | M | Ghana | IITA-Africa RISING |
| 14 | Abdul Nurudeen | M | Ghana | Kwame Nkrumah Univ Science and Technology |
| 15 | Benard Hagan | M | Ghana | Animal Research Institute |
| 16 | Dominic Sobre | M | Ghana | IITA-Africa RISING |
| 17 | Robert Authur | M | Ghana | Ministry of Agriculture |
| 18 | Cedrick Guedessou | M | Mali | International Crops Research Institute for the Semi-arid Trop |
| 19 | Sinare Boubacar | M | Mali | International Crops Research Institute for the Semi-arid Trop |
|  | Resource persons |  |  |  |
| 20 | Asamoah Larbi | M |  | IITA-Africa RISING |
| 21 | Sam Ofodile | M |  | IITA-Biometric |
| 22 | Sam Korie | M |  | IITA-Biometric |
|  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Time Table: Africa RISING-West Africa – Training Course in Biometrics and Data Management with SAS, 4-8 August, 2014  **Little Acre Hotel, Aburi, Ghana (Tel: 0289350500 / 0307091977 / 0307035773)** | | | | | |
| August | Monday 04 | Tuesday 05 | Wednesday 06 | Thursday 07 | Friday 08 |
| 08.30  10.00  10.15 | Set-up of Systems  Opening (Dr. Larbi)    Course Objective (SK)  Diagnostics (SK)  (Group Photograph)  --- Morning ----  Methods in Agric Research  - Basics  - Field Experimentation  - Field/Plot Techniques  - Field Book  (SK) | Data Managmnt with SAS  - Data Manipulation  - SAS Procedures  - Graphical Outputs  (SO)  …… coffee break ……  Data Analysis  - Summary Statistics  - Data Transformation  - Treatment of missing  observation  (SO) | Regression Analysis  - Concept  - Simple Linear Model  - Multiple Linear Model  - Applications  (SK)  …… coffee break ……  Regression Analysis contd  - Computation  - Selection of Variables  - Residual Examination  - Quantitative &  - Dummy variables  (SO) | GLM (Analysis)  - Treat/Block Structures  - Fixed effects models  - Random effects models  ANOVA Models & Test  of Hypothesis  - CRD, RCBD,  - Factorial in RCBD  (SK)  …… coffee break ……  ANOVA Models contd  - Split-Plot, Strip-Plot  - Nested,  - Latin Sq, etc.  (SK) | Multivariate Procedures  - Classification  - Cluster analysis  (SK)  …… coffee break ……  Multivariate Proc. contd  - Variable reduction  techniques  - PCA  (SK) |
| 12.30 | Lunch | ………………………….. | Lunch | ……………………… | Lunch |
| 13.30  15.00  15.15 | Data Format & Capture  - MS Excel in data entry  - Quantitative data  - Qualitative data  - Variable conversion/  coding  - Missing data codes  (SO)  --- Afternoon ---  Introduction to SAS  - SAS Software  - Programming in SAS  - Exploring Data  - SAS Files & Libraries  (SO) | Data Analysis contd.  - Frequencies  - Tabulations  - Correlation  - T-test (paired & grouped  data)  (SO)  …. . coffee break …..  Exercises  (Computer application) | Experimental Design  - Principles  - GLM (definition)  - Common Exptal Designs  - Layout/Models  (CRD, RCBD, Factorial,  Split-Plot, Latin Sq, etc)  (SK)  …. . coffee break …..  Inferential Statistics  - Parameter Estimation  - Hypothesis Testing  - Analysis Designed Expts  - Requirements  (SK) | ANOVA Models contd  - Mean Comparison  - Contrasts  (SO)  …. . coffee break …..  Exercises  (Computer application) | Group Assignments  - Discussion  (with research data)  (SK)    (Assessor: SO)  …. . coffee break …..  Evaluation & Certificates  Closing. |
| 17.00 |  |  |  |  |  |